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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/073,772	02/11/2002	Jaap Andre Haitsma	PHNL 010110	5208

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EXAMINER	
KLIMACH, PAULA W	
ART UNIT	PAPER NUMBER
2135	

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/073,772	HAITSMA ET AL.	
	Examiner	Art Unit	
	Paula W. Klimach	2135	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 February 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 February 2002* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *02/11/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-19, and 22-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1, 12, 18, 19, 22-24 are directed to a method of generating/matching a hash signal to identify an information signal. The examiner asserts that the collection of information does not fall within the statutory classes listed in 35 USC 101. Thus, while the claimed invention might be labeled as a device/method it is in fact functional descriptive material (i.e computer program). Claims 1, 12, 18, 19, and 22-24 are rejected as being directed to a functional descriptive material (i.e., computer program).

Drawings

The drawings are objected to because descriptive labels other than numerical are needed for figures 1 and 4. See 37 CFR 1.84(o). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 and 9-13 are rejected under 35 U.S.C. 102(b) as being anticipated by the article by Schneider (published by IEEE).

In reference to claims 1 and 13, Schneider discloses a system to authenticate images presented wherein dividing the information signal into frames (Fig. 8), computing a hash word for each frame (Fig. 8), and concatenating successive hash words to constitute the hash signal (section 6.0 column 2 lines 1-9).

In reference to claim 2 wherein said computing step comprises the steps of: dividing each frame of the information signal into disjoint bands or blocks (page 229 section 5.0 column 1 lines 11-23); calculating a property of the signal in each of said bands or blocks (page 229 section 5.0 column 1 lines 11-23); comparing the properties in the bands or blocks with respective thresholds (page 228 section 5.0 column 2); representing the results of said comparisons by respective bits of the hash word (section 5.0 column 2).

In reference to claim 12 Schneider discloses a system to authenticate images presented wherein dividing the information signal into blocks (Fig. 8); extracting for each block a feature of the information signal within said block (Fig. 2); comparing the value of the extracted feature with a threshold (Fig. 3); generating for each block a hash bit indicating whether the value of the extracted feature is larger or smaller than said threshold (Fig. 3); determining for each block reliability information indicating whether the value of the extracted feature differs substantially from said threshold (section 6.0 lines 1-6 column 1); combining said hash bits and said reliability information of the blocks into a hash value having reliable hash bits for which the

extracted feature differs substantially from said threshold, and unreliable bits for which the extracted feature does not differ substantially from said threshold (Fig. 8 second level hash).

In reference to claim 9 wherein said information signal is divided into overlapping frames (Fig. 8).

In reference to claim 10, wherein the information signal is a video signal, the frames of which are divided into blocks, the mean luminance of a block constituting the property of said block (Fig. 8 and section 5.0).

In reference to claim 11, further comprising the step of using the inputs of said comparing steps to generate information, which is indicative of the reliability of the bits of the hash word (Fig. 8 second level hash).

Claim 24 is rejected under 35 U.S.C. 102(b) as being anticipated by Boles et al (5,019,899).

Boles discloses a system for receiving and/or recording at least a part of said multimedia signal (Fig. 1 part 40), deriving a hash signal from said multimedia signal, sending said hash signal to a database for matching it with hash signals stored in said database (column 4 lines 21-35), and receiving from said database an identifier of the multimedia signal (column 4 lines 36-43).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider in view of ISO/IEC specification.

In reference to claim 3 wherein the property of a corresponding band or block in a previous frame constitutes said threshold.

Schneider does not expressly disclose the property of a corresponding band or block in a previous frame constitutes said threshold.

However the specification of the ISO discloses comparing a frame from a previously decoded frame (7.6.1).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to compare a block to a threshold as in the specification of the ISO in the system of Schneider. One of ordinary skill in the art would have been motivated to do this because this will help determine the motion compensation.

In reference to claim 4 wherein the property of a neighboring band or block in a previous frame constitutes said threshold

Schneider does not expressly disclose the property of a neighboring band or block in a previous frame constitutes said threshold.

However the specification of the ISO discloses comparing a frame from a previously decoded frame (7.6.1).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to compare a block to a threshold as in the specification of the ISO in the system

of Schneider. One of ordinary skill in the art would have been motivated to do this because this will help determine the motion compensation.

In reference to claims 5-8, wherein the bands or blocks are frequency bands of the frequency spectrum of the respective frame of the information signal.

Schneider discloses comparing the hash values and contains the intensity information for the histogram.

Therefore at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to compare a the frequency spectrum of the respective frame. One of ordinary skill in the art would have been motivated to do this because this would show the difference in the content of the frames.

Claims 14-21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the article by Schneider in view of Boles (US 5, 019, 899).

In reference to claims 14 and 21 Schneider discloses a system to authenticate images presented a method performed by this system includes calculating a difference between the input block of hash words and a stored block of hash words in which the hash word found in step has the same position as the selected hash word in the input block (page 228 section 5.0 column 2 lines 6-21); repeating steps (a) to (c) for a further selected hash word until said difference is lower than a predetermined threshold (Fig. 8).

Schneider does not expressly disclose selecting a hash word of said input block of hash words; searching said hash word in the database.

Boles system for creating digital signatures form frames of selected video segments and storing them in databases (abstract). The system includes the steps of selecting a hash word of said input block of hash words (column 4 lines 34-35); searching said hash word in the database (column 4 lines 36-43). The signature is the equivalent of the hash as disclosed by the applicant in the applicant admitted prior art.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to keep the hash values in a database to search for the hash as in. One of ordinary skill in the art would have been motivated to do this because a database is a method of organizing and sorting and searching information in a orderly fashion.

In reference to claim 15, wherein the further selected hash word is another hash word of the input block of hash words (Fig. 8).

In reference to claim 16, wherein the further selected hash word is obtained by reversing a bit of the previously selected hash word (Fig. 3).

In reference to claim 17, further comprising the steps of receiving information which is indicative of the reliability of the bits of the selected hash word, and using said information to determine the bit to be reversed (Fig. 8 second level hash).

In reference to claims 18-19, Schneider discloses a system to authenticate images presented a method performed by this system includes receiving said hash value in the form of a plurality of reliable hash bits and unreliable hash bits (Fig. 3); (c) for each stored hash value found, calculating the bit error rate between the reliable bits of the hash value representing the unidentified information signal and the corresponding bits of the stored hash value (Fig. 3); and

determining for which stored hash values the bit error rate is minimal and sufficiently small (Fig. 3).

Schneider does not expressly disclose searching in the database the stored hash values for which holds that the reliable bits of the applied hash value match the corresponding bits of the stored hash value.

Boles system for creating digital signatures form frames of selected video segments and storing them in databases (abstract). The system includes the steps of searching in the database the stored hash values for which holds that the reliable bits of the applied hash value match the corresponding bits of the stored hash value (column 4 lines 34-43). The signature is the equivalent of the hash as disclosed by the applicant in the applicant admitted prior art.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to keep the hash values in a database to search for the hash as in. One of ordinary skill in the art would have been motivated to do this because a database is a method of organizing and sorting and searching information in a orderly fashion.

In reference to claim 20 Schneider teaches further the steps of repeating steps (b)-(f) for other hash values of the unidentified information signal until a series of stored hash values is found for which the bit error rate is minimal and sufficiently small (Fig. 8).

In reference to claim 23 Schneider teaches calculating the difference between the derived hash signal and the stored hash signal (Fig. 3). Schneider also discloses deriving a hash signal from said information signal (Fig. 8).

However Schneider does not expressly disclose matching said hash signal with a hash signal identifying said information signal stored in a database.

Boles discloses matching said hash signal with a hash signal identifying said information signal stored in a database (column 4 lines 36-43).

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boles.

In reference to claim 25, wherein said steps of receiving and/or recording the multimedia signal, deriving and sending the hash signal, and receiving the identifier are performed by a mobile telephone device.

Although Boles does not disclose receiving the identifier are performed by a mobile telephone device, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use mobile telephone device. One of ordinary skill in the art would have been motivated to do this because the system of Boles discloses the use of processors and mobile telephones are processor devices.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boles in view of Eichstaedt et al (6,654,735 B1).

In reference to claim 22 Boles discloses deriving a hash signal from said information signal (column 4 lines 21-35), and matching said hash signal with hash signals identifying stored in a database (column 4 lines 36-43).

Although Boles discloses the matching of a hash signal with hash signals identifying stored video in a database, Boles does not discloses websites stored in a database.

Eichstaedt discloses a system for automatically generating user interest profiles and delivering information to users (abstract). The system discloses storing web pages in a database (column 2 lines 16-18). Web pages are address for a resource on the interent

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to store Internet websites in a database as in Eichstaedt in the system of Boles. One of ordinary skill in the art would have been motivated to do this because databases are convenient and ordered methods of storing information.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paula W. Klimach whose telephone number is (571) 272-3854. The examiner can normally be reached on Mon to Thr 9:30 a.m to 5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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